TECAFINE PMP natural - Stock Shapes (rods, plates, tubes)

Chemical Designation
PMP (Polymethylpentene)

Colour
light yellow transparent

Density
0.83 g/cm^3

Main features
- good chemical resistance
- electrically insulating
- good machinability
- easy to polish
- high creep resistance
- low density
- high toughness

Target Industries
- food technology
- mechanical engineering
- automotive industry

Mechanical properties	*parameter*	*value*	*unit*	*norm*		*comment*
Tensile strength	50mm/min	26	MPa	DIN EN ISO 527-2		(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. (6) Specimen in 4mm thickness
Modulus of elasticity (tensile test)	1mm/min	1000	MPa	DIN EN ISO 527-2	1)	
Tensile strength at yield	50mm/min	26	MPa	DIN EN ISO 527-2		
Elongation at yield (tensile test)	50mm/min	6	%	DIN EN ISO 527-2		
Elongation at break (tensile test)	50mm/min	67	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	31	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	800	MPa	DIN EN ISO 178		
Compression strength	1% / 2% 5mm/min, 10 N	11 / 19	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	1000	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	17	kJ/m^2	DIN EN ISO 179-1eU	5)	
Ball indentation hardness		58	MPa	ISO 2039-1	6)	

Thermal properties	*parameter*	*value*	*unit*	*norm*		*comment*
Service temperature	short term	170	°C		1)	(1) Found in public sources. Individual testing regarding application conditions is mandatory.
Service temperature	long term	120	°C			

Electrical properties	*parameter*	*value*	*unit*	*norm*		*comment*

Other properties	*parameter*	*value*	*unit*	*norm*		*comment*
Water absorption	24h / 96h (23°C)	<0.01 / <0.01	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) (+) limited resistance (3) - poor resistance (4) Corresponding means no listing at UL (yellow card). The information might be taken from resin, stock shape or estimation. Individual testing regarding application conditions is mandatory.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		-		-	3)	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	4)	

Our information and statements reflect the current state of our knowledge and shall inform about our products and their applications. They do not assure or guarantee chemical resistance, quality of products and their merchantability in a legally binding way. Our products are not defined for use in medical or dental implants. Existing commercial patents have to be observed. The corresponding values and information are no minimum or maximum values, but guideline values that can be used primarily for comparison purposes for material selection. These values are within the normal tolerance range of product properties and do not represent guaranteed property values. Therefore they shall not be used for specification purposes. Unless otherwise noted, these values were determined by tests at reference dimensions (typically rods with diameter 40-60 mm according to DIN EN 15860) on extruded and machined specimen. As the properties depend on the dimensions of the semi-finished products and the orientation in the component (esp. in reinforced grades), the material may not be used without a separate testing under individual circumstances. The customer is solely responsible for the quality and suitability of products for the application and has to test usage and processing prior to use. Data sheet values are subject to periodic review, the most recent update can be found at www.ensingerplastics.com. Technical changes reserved.

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